

ABSTRACT OF THE DISCLOSURE

A method and system for mapping original Media Access Control (MAC) addresses to unique locally administered virtual MAC addresses in an Ethernet network. An access node uses an address mapping function to map each original MAC address to one of a plurality of locally administered virtual MAC addresses, and vice versa. The six most significant bits of the first octet of the address are used to define a domain for the address, and the second-least significant bit of the first octet indicates that the address is a locally administered MAC address. The second and third octets of the address are used to indicate a unit-specific use. The last three octets of the address indicate an organizationally assigned unit-unique MAC address. Additional address mapping functions may map original addresses from different sources onto the same Ethernet network while maintaining the uniqueness of each virtual MAC address.